

Application No. 09/985,757  
Reply to Office Action of February 13, 2004

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 36. This sheet, which includes Figs. 36-38, replaces the original sheet including Figs. 36-38.

Attachment: Replacement Sheet

REMARKS

As the Examiner is aware, this case is part of an original "bulk filing" by Motorola. Special IDS procedures have been approved for these cases, and in this case several 1449's have kindly been considered. A supplemental IDS filing is also included with this filing. In this regard, it is believed that the listing of references herein is proper.

The rejection of the Claims is now moot in view of the amendment to the claims, specifying a novel and unobvious semiconductor structure, as follows:

a monocrystalline silicon substrate;  
an amorphous oxide material in contact with the monocrystalline silicon substrate;  
a monocrystalline metal oxide selected from the group consisting of alkaline earth metal titanates, alkaline earth metal zirconates, alkaline earth metal hafnates, alkaline earth metal tantalates, alkaline earth metal ruthenates, alkaline earth metal niobates, alkaline earth metal vanadates, alkaline earth metal tin-based perovskites, lanthanum aluminate, lanthanum scandium oxide, gadolinium oxide and mixtures thereof contacting the amorphous oxide material; and  
a first monocrystalline compound semiconductor material overlying the monocrystalline metal oxide material

this structure being claimed in combination with a microcavity semiconductor laser formed at least partially of the monocrystalline compound semiconductor material, and a waveguide overlying said microcavity semiconductor laser.

In this regard, the claims herein have been amended in accordance with discussions held between Applicants and the Patent Office, and these amendments place this case in condition for allowance by describing, in addition to other patentable features, a novel and

unobvious semiconductor structure which is, itself, both novel and unobvious. Note, for example, the requirement that the amorphous oxide material be in contact with the monocrystalline substrate, the requirement that the monocrystalline metal oxide contact the amorphous oxide material, and the lack of a metal nitride layer. These amendments have resulted from a study of the references cited in the various IDSs in this "bulk filing" and from associated discussions with Examiner Baumeister, SPE Chaudhury, SPE Flynn, SPE Lee, and others at the PTO. None of Ho, Little, Guenzer or Kaushik, either alone or in combination, describe the semiconductor "stack" as now claimed herein, nor the particular laser-specific limitations described in the claims.

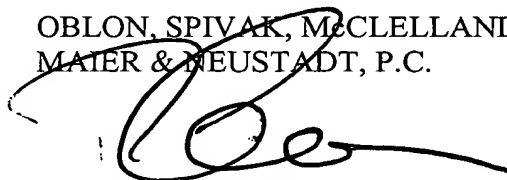
As noted above, the amendment to the rejected claims places this case in condition for allowance. Accordingly, early notice to this effect is respectfully requested.

With regard to the double patenting rejection, the Office is kindly holding these rejections in abeyance until the indication of allowable subject matter. In this regard, Applicant is now preparing their response to the double patenting rejections in this series of cases, which is expected to address all such rejections.

Finally, it is noted that this case is entitled to priority. This priority extends to at least the independent claims herein, as may be checked by, e.g., reference to U.S. patent publication 2003-0035964, corresponding to the parent case herein.

Respectfully submitted,

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